

## Abstract

An anti-bacterial polymer of the present invention consists of a vapor deposition-polymerization reaction product of a diaminobenzoic acid monomer or halogen atom-containing diamine monomer and a monomer reactive with these monomers. The anti-bacterial polymer can be prepared by a method, which comprises the step of subjecting a gas obtained by evaporating a diaminobenzoic acid monomer or halogen atom-containing diamine monomer and a gas obtained by evaporating a monomer reactive with these monomers to vapor deposition-polymerization, in a vacuum, to thus form an anti-bacterial polymer. The method permits the formation of a film having a desired thickness even on the surface having a complicated shape such as the surface of, for instance, a heat exchanger.